FEDERAL SUPPLY CLASS
6145

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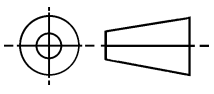

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PREPARED BY SAE SUBCOMMITTEE AE-8D

SAE The Engineering Society For Advancing Mobility Land Sea Air and Space®
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE STANDARD

WIRE, ELECTRICAL, FLUOROPOLYMER-INSULATED, EXTRUDED TFE, SILVER-COATED COPPER CONDUCTOR, 1000 VOLT

AS22759/9
SHEET 1 OF 4

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THE COMPLETE REQUIREMENTS FOR PROCURING THE WIRE DESCRIBED HEREIN SHALL CONSIST OF THIS DOCUMENT AND THE ISSUE IN EFFECT OF SPECIFICATION MIL-W-22759.

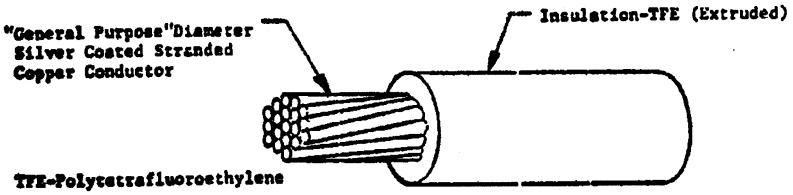

TABLE I. CONSTRUCTION DETAILS.

Part No. 1/	Wire size	Stranding (Number of strands X AWG gage of strands)	Diameter of stranded conductor (inches)		Finished wire		
			(min)	(max)	Resistance at 20°C (68°F) (ohms/1000 ft) (max)	Diameter (inches)	Weight (lbs/1000 ft) (max)
M22759/9-28-*	28	7 X 36	.014	.015	63.8	.043 ±.002	1.90
M22759/9-26-*	26	19 X 38	.018	.020	38.4	.048 ±.002	2.57
M22759/9-24-*	24	19 X 36	.023	.025	24.3	.053 ±.002	3.33
M22759/9-22-*	22	19 X 34	.029	.032	15.1	.060 ±.002	4.60
M22759/9-20-*	20	19 X 32	.037	.040	9.19	.068 ±.002	6.40
M22759/9-18-*	18	19 X 30	.046	.050	5.79	.078 ±.002	9.10
M22759/9-16-*	16	19 X 29	.052	.057	4.52	.085 ±.002	11.0
M22759/9-14-*	14	19 X 27	.065	.072	2.88	.100 ±.003	16.4
M22759/9-12-*	12	19 X 25	.082	.090	1.81	.120 ±.004	25.3
M22759/9-10-*	10	37 X 26	.106	.112	1.19	.141 ±.004	38.2
M22759/9-8-*	8	133 X 29	.158	.169	.558	.207 ±.005	68.8

1/ PART NO.: The asterisks in the part number column, Tables I through III, shall be replaced by color code designators in accordance with MIL-STD-681. Examples: Size 20, white - M22759/9-20-9; white with orange stripe - M22759/9-20-93.

TABLE II. PERFORMANCE DETAILS.

Part No.	Abrasion resistance (Procedure II)				Bend testing			
					Mandrel diameter (inches) (±3%)		Test load (lbs) (±3%)	
	Resistance (inches of tape) (min) (initial condition)	Weight support bracket	Weight (lbs)	Tension load (lbs)	Life cycle (oven & bend tests) 1/	Cold bend test	Life cycle (oven & bend tests) 1/	Cold bend test
M22759/9-28-*	24	A	.50	1.0	.125	.250	.50	
M22759/9-26-*	24	A	.50	1.0	.125	.250	.50	
M22759/9-24-*	30	A	.50	1.0	.125	.250	.50	
M22759/9-22-*	30	A	.50	1.0	.250	.375	.75	
M22759/9-20-*	30	A	.50	1.0	.250	.375	.75	
M22759/9-18-*	36	B	.75	1.0	.250	.375	1.00	
M22759/9-16-*	36	B	.75	2.0	.375	.500	1.00	
M22759/9-14-*	36	B	1.25	2.0	.500	.750	2.00	
M22759/9-12-*	36	B	1.25	2.0	.500	.750	2.00	
M22759/9-10-*	48	B	1.25	2.0	.750	1.00	3.00	
M22759/9-8-*	48	C	2.00	2.0	.750	1.00	3.00	

1/ Also for bend tests after immersion.

ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 200°C (392°F) max conductor temperature

VOLTAGE RATING: 1000 volts (rms) at sea level

SPARK TEST OF PRIMARY INSULATION: Not required

IMPULSE DIELECTRIC TEST: 9.5 kilovolts (peak), 100% test

INSULATION RESISTANCE: 50,000 megohms for 1000 ft (min)

WRAP TEST:
"Wrap back" test required, no cracking
Oven temperature; 313 ±2°C (595.4 ±3.6°F)

BLOCKING: 260 ±2°C (500 ±3.6°F)

SHRINKAGE: 0.03 inch max at 290 ±2°C (554 ±3,6°F)

WICKING: No requirement

LOW TEMPERATURE (COLD BEND):
Bend temperature: -65 ±2°C (-85 ±3.6°F)
Dielectric test, 5000 volts (rms), 60 Hz

THERMAL SHOCK:
Oven temperature 200 ±2°C (392 ±3.6°F)
Max change in measurement
Sizes 28 through 12: 0.060 inch
Sizes 10 through 8: 0.100 inch

FLAMMABILITY: Post-flame dielectric test not required

LIFE CYCLE:
Oven temperature 275 ±2°C (527 ±3.6°F)
Dielectric test, 5000 volts (rms), 60 Hz

DIELECTRIC TEST AFTER IMMERSION: 5000 volts (rms), 60 Hz

ACID RESISTANCE:
Required
Dielectric test, 5000 volts (rms), 60 Hz

CONDUCTOR STRAND ADHESION REQUIREMENTS: Shall be in accordance with 3.6.11 of MIL-W-22759.

ABRASION RESISTANCE AFTER IMMERSION: No requirement

HUMIDITY RESISTANCE: No requirement

SURFACE RESISTANCE: 500 megohm-inches (min), initial and final readings.

SMOKE: 290°C (554°F)

COLOR: In accordance with MIL-STD-104, Class 1; white preferred

COLOR STRIPING OR BANDING DURABILITY: 250 cycles (500 strokes) (min), 500 grams weight

IDENTIFICATION DURABILITY: 125 cycles (250 strokes) (min), 500 grams weight

WIRE LENGTH REQUIREMENTS: Schedule A

SUPERSESSION DATA: The wire of this specification sheet, by part number, replaces and supersedes the wire of MS18113(AS) (canceled) in accordance with Table III.

TABLE III. SUPERSESSION BY PART NUMBER

Part number MS18113(AS)	Part number MIL-W-22759/9
MS18113-28-*	M22759/9-28-*
MS18113-26-*	M22759/9-26-*
MS18113-24-*	M22759/9-24-*
MS18113-22-*	M22759/9-22-*
MS18113-20-*	M22759/9-20-*
MS18113-18-*	M22759/9-18-*
MS18113-16-*	M22759/9-16-*
MS18113-14-*	M22759/9-14-*
MS18113-12-*	M22759/9-12-*
MS18113-10-*	M22759/9-10-*
MS18113-8-*	M22759/9-8-*